

AMENDMENT TO THE CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Currently Amended) A computer implemented method for rendering a synthesized image, comprising:

accessing a first texon mask and a second texon mask, each texon mask being indicative of feature elements in respective first and second sample textures;

creating a third texon mask being based on a combination of the first texon mask and the second texon mask; and

creating a synthesized texture image guided by the first texon mask, the second texon mask, the

first sample texture and the second sample texture, wherein creating the synthesized texture comprises:

creating a first modified texture guided by the first texton mask, the third texton mask and the first sample texture;

creating a second modified texture guided by the second texton mask, the third texton mask and the second sample texture;

combining the first modified texture and the second modified texture..

11. (Original) The method of claim 10 wherein creating the third texton mask comprises interpolating between the first texton mask and the second texton mask.

12. (Original) The method of claim 11 wherein interpolating between the first texton mask and the second texton mask comprises interpolating two dimensional functions of the first texton mask and the second texton mask in three dimensions and obtaining a two dimensional portion.

13. (Original) The method of claim 11 wherein creating the third texton mask comprises smoothing the third texton mask after interpolating.

14. (Original) The method of claim 13 wherein smoothing comprises using a Gaussian function.

15. (Original) The method of claim 13 wherein creating the third texton mask comprises setting values of the third texton mask as a function of a threshold.

16. (Cancelled)

17. (Currently Amended) The method of claim ~~16~~—10 wherein combining the first modified texture and the second modified texture includes using a selected transition function.

18. (Currently Amended) The method of claim ~~16~~—10 wherein creating the first modified texture includes identifying a portion of the first modified texture to synthesize and identifying a corresponding portion of the third texton mask for the portion to be synthesized, and wherein creating the second modified texture includes identifying a portion of the second modified texture to synthesize and identifying a corresponding portion of the third texton mask for the portion to be synthesized.

19. (Original) The method of claim 18 wherein creating the first modified texture includes identifying a portion of the first texton mask similar to the portion of the third texton mask and identifying a corresponding portion of the first sample texture corresponding to the portion of the first texton mask, and wherein creating the second modified texture includes identifying a portion of the second texton mask similar to the portion of the third texton mask and identifying a corresponding portion of the second sample texture corresponding to the portion of the second texton mask.

20. (Original) The method of claim 19 wherein creating the first modified texture includes assigning pixel characteristics of the portion of the first modified texture according to the portion of the first sample texture, and wherein creating the second modified texture includes assigning pixel characteristics of the portion of the second modified texture according to the portion of the second sample texture.

21. (Currently Amended) A computer implemented method for rendering a synthesized texture on an image of a three-dimensional object, comprising:

accessing a two-dimensional progressively-variant sample texture, a texton mask for the sample texture and a representation of the three-dimensional object comprising a mesh of a plurality of vertices; and

creating a synthesized texture on the object guided by the two-dimensional progressively-variant sample texture, the texton mask for the sample texture and the mesh of a plurality of vertices, wherein creating the synthesized texture comprises synthesizing a texton mask on the mesh along with a target texture by determining a texton mask value and determining a color value at each vertex, and wherein determining the color value includes determining a candidate pool of pixels to select from, and wherein determining the texton mask value includes forming a first neighborhood of mask values of vertices about

each vertex and a second neighborhood of mask values about each pixel in the candidate pool of pixels, and selecting the mask value for the candidate pixel having the smallest distance between the first neighborhood of mask values of the vertex and the second neighborhood of mask values about each pixel in the candidate pool of pixels.

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Currently Amended) The method of claim 26—21 wherein determining the color value includes forming a first neighborhood of color values of vertices about each vertex and a second neighborhood of color values about each pixel in the candidate pool of pixels.

28. (Original) The method of claim 27 wherein determining the color value at each vertex includes selecting the color value for the candidate pixel having the smallest of the sum of the distance between the first neighborhood of mask values of the vertex and the second neighborhood of mask values about each

pixel in the candidate pool of pixels and the distance between the first neighborhood of color values of the vertex and the second neighborhood of color values about each pixel in the candidate pool of pixels.

29. (Original) The method of claim 28 wherein a number of pixels forming the neighborhoods of mask values is greater than a number of pixels forming neighborhoods of color values.